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**From:** Mason, Steve [mason.steve@epa.gov]  
**Sent:** 8/29/2017 9:49:52 PM  
**To:** Bernier, Roberto [bernier.roberto@epa.gov]; McAteer, Mike [mcateer.mike@epa.gov]  
**CC:** Leonova, Larisa [leonova.larisa@epa.gov]; Foster, Althea [foster.althea@epa.gov]; Smalley, Bryant [smalley.bryant@epa.gov]  
**Subject:** RE: Updated IMAAC Product

FAA informed us they did issue a temporary flight restriction over the facility...

With Regards, Steve

-----Original Message-----

From: Bernier, Roberto  
Sent: Tuesday, August 29, 2017 4:48 PM  
To: McAteer, Mike <mcateer.mike@epa.gov>  
Cc: Mason, Steve <mason.steve@epa.gov>; Leonova, Larisa <leonova.larisa@epa.gov>; Foster, Althea <Foster.Althea@epa.gov>; Smalley, Bryant <smalley.bryant@epa.gov>  
Subject: RE: Updated IMAAC Product

This is what we gathered from the IMAAC modeling. There are two for peroxides after updating volume down to 7,600 lbs. I'll try to email the power points again as pdfs

Bullets from IMAAC plume modeling – Arkema, Crosby, TX Plant (assuming population is present)

- 47,000 lbs of SO<sub>2</sub> – Prevailing winds due south within 4 hours. Death at 0.5 miles, injury possible at 3.3 mile, area of concern at 5.3 miles. Amount was reduced by a factor of 2 to account for rainout and removal of SO<sub>2</sub> by the water surface.

- 300 lbs of Chlorine – Prevailing winds due south within 4 hours. Death within facility, injury possible at 0.3 miles, area of concern at 0.6 miles.

- 1M lbs of peroxides equivalent to 200,000 lbs of TNT (radius)
  - o 100% fatalities at 87 m
  - o Widespread fatalities at 229 m
  - o Serious injuries at 358 m
  - o Light injuries at 801 m
  - o Non-explosion but degradation with water will mean acid dilution but present within the near flood waters.

- UPDATED peroxide to 7,600 lbs (radius)
  - o 100% fatalities at 22 m
  - o Widespread fatalities at 78 m
  - o Serious injuries at 120 m
  - o Light injuries at 270 m
  - o Non-explosion but a degradation with water will mean acid dilution but present within the near flood waters.

-----Original Message-----

From: McAteer, Mike  
Sent: Tuesday, August 29, 2017 4:20 PM  
To: Bernier, Roberto <bernier.roberto@epa.gov>  
Cc: Mason, Steve <mason.steve@epa.gov>  
Subject: Re: Updated IMAAC Product

Can't open either. Can you give me bullet points

Sent from my iPhone

> On Aug 29, 2017, at 4:17 PM, Bernier, Roberto <bernier.roberto@epa.gov> wrote:

>  
> Both, SO<sub>2</sub> and Cl<sub>2</sub>, Peroxides

>  
> From: Leonova, Larisa  
> Sent: Tuesday, August 29, 2017 4:09 PM  
> To: Rauscher, Jon <Rauscher.Jon@epa.gov>; Delgado, Eric <Delgado.Eric@epa.gov>; Bernier, Roberto <bernier.roberto@epa.gov>  
> Cc: R6HarveyENVL <R6HarveyENVL@epa.gov>  
> Subject: FW: Updated IMAAC Product

>  
>

>  
> From: Miller, Timothy J CTR DTRA J9 (US) [mailto:timothy.j.miller270.ctr@mail.mil]  
> Sent: Tuesday, August 29, 2017 3:53 PM  
> To: Leonard.willittsjr@fema.dhs.gov<mailto:Leonard.willittsjr@fema.dhs.gov>; fema-nwc@fema.dhs.gov<mailto:fema-nwc@fema.dhs.gov>; DTRA Ft Belvoir J3-7 Mailbox Joint Ops Center <dtra.belvoir.J3-7.mbx.joint-ops-center@mail.mil<mailto:dtra.belvoir.J3-7.mbx.joint-ops-center@mail.mil>>; Poland, Ronald E Jr SSG USARMY (US) <ronald.e.poland.mil@mail.mil<mailto:ronald.e.poland.mil@mail.mil>>; Leonova, Larisa <leonova.larisa@epa.gov<mailto:leonova.larisa@epa.gov>>; s&tcsacreachback@st.dhs.gov<mailto:s&tcsacreachback@st.dhs.gov>  
> Cc: DTRA Ft Belvoir J9 Mailbox Reachback <dtra.belvoir.J9.mbx.reachback@mail.mil<mailto:dtra.belvoir.J9.mbx.reachback@mail.mil>>  
> Subject: Updated IMAAC Product  
>  
> IMAAC Technical Operations has been asked to update a modeling product for the EPA for a hypothetical chemical release in Crosby, TX at 1800Z. This is a request is for a single agency and only involves a hypothetical incident at this time. The updated products are posted to the IMAAC HSIN portal and attached here. Should the situation change, a notification informing IMAAC participants of this change (and any additional details) will be sent out. Please inform us if another IMAAC agency has been asked to respond to the same incident.  
> <RFI\_17\_0831U\_IMAAC\_update1-SO2.pptx>  
> <RFI\_17\_0831U\_IMAAC\_rev0-Modeling for Cl and Peroxide.pptx>